

sequence phase searchers and for determining a minimum phase variation period based on the PN phase and energy information received from said at least two PN sequence phase searchers,

wherein said different search conditions include phases and search periods corresponding to a plurality of PN sequence phase search starting points.

3. (Amended) The PN sequence phase searching apparatus of claim 1, wherein said plurality of PN sequence phase search starting points in said different search conditions are assigned to said at least two PN sequence phase searchers by dividing a PN sequence by the number of the PN sequence phase searchers.

4. (Amended) The PN sequence phase searching apparatus of claim 1, wherein said different search conditions are set by dividing a PN sequence into predetermined periods and the divided search periods are sequentially assigned to said at least two PN sequence phase searchers.

7. (Amended) A PN sequence phase searching method in a multi-carrier CDMA mobile communication system, comprising the steps of:
searching for the PN sequence phase of one of at least two different band input signals in parallel using different assigned search conditions;
outputting PN phase and energy information; and
determining a minimum phase variation period based on the PN phase and energy information,
wherein the different assigned search conditions include phases and search periods corresponding to a plurality of PN sequence phase search starting points.

9. (Amended) The PN sequence phase searching method of claim 7, wherein the different search conditions are set by dividing a PN sequence by the number of the parallel PN sequence phase searches and assigning corresponding phases produced by the

division as the PN sequence phase search starting points.

10. (Amended) The PN sequence phase searching method of claim 7, wherein the different search conditions are set by dividing a PN sequence into predetermined periods and the divided search periods are sequentially assigned for the parallel PN sequence phase searches.

11. (Amended) The PN sequence phase searching method of claim 7, wherein said minimum phase variation period is determined by phase information corresponding to the highest energy among the energy information.

REMARKS

Claims 1-20 are pending in the application. It is gratefully acknowledged that Claims 14-20 have been allowed. It is also gratefully acknowledged that Claims 6 and 13 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-5 and 7-12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Blakeney, II et al. (U.S. Patent 5,490,165) in view of Naruse et al. (U.S. Patent 6,263,010). Claim 11 has been rejected under 35 U.S.C. §112, second paragraph. Claims 1, 3, 4, 7, 9, 10 and 11 are herein amended. Claims 2 and 8 are cancelled without prejudice.

With respect to the rejection of Claim 11, the Examiner stated that there is insufficient antecedent basis for the limitation "among the energies". Claim 11 has been amended to overcome the rejection by deleting "energies" and adding "energy information". The amendment is for clarification and not for purposes of patentability. Withdrawal of the rejection of Claim 11 is respectfully requested.

The Examiner rejected Claims 1-5 and 7-12 under 35 U.S.C. §103(a). With respect to dependent Claims 2 and 8, the Examiner stated that Blakeney, II et al. inherently discloses the limitations recited in the claims. Applicants respectfully disagree.